REMARKS

Claims 24-25, 28-29, 31-33, 35-36, 38-41 are pending in this application.

The Office Action of May 23, 2005, states that Applicant has not specifically applied each limitation or element of each of the copied claims to the disclosure of the application. In response, the application of the limitations of the pending claims to the disclosure of the application is as follows:

24. A method of controlling the operating mode of an equalizer comprising steps of:	Figs. 1, 2, 11 and 12; see equalizer 36 in Fig. 2 and specification at page 14, lines 10-23.
identifying a direct current (DC) component of a received signal; and	Fig. 1, pilot detector 34; see Figs. 11 and 12 for details; and page 16, lines 4-19 and page 38, line 10-page 39, line 9 of the specification.
controlling the operating mode of the equalizer in response to the identification of the direct current (DC) component of said received signal,	Fig. 2 shows a DC level from detector 34 controlling the operating mode of equalizer 36; see page 6, lines 19-28, page 17, lines 6-9 and sentence bridging pages 17 and 18.
wherein the received signal at times comprises multi-level symbols representing data and a field synchronizing signal, said symbols being characterized by being accompanied by a substantially constant direct current (DC) offset component,	The VSB television signal for HDTV inherently contains multi-level symbols and field sync signals, the symbols accompanied by a DC offset; page 13, lines 13-25; page 17, line 12-page 18, line 3.
and at other times comprises multi-level symbols representing data and being characterized by not being accompanied by said substantially constant direct current (DC) offset component,	The QAM television signal for HDTV inherently contains multi-level symbols and field sync signals, but the symbols do not have a DC offset; page 13, lines 13-25; page 17, line 12-page 18, line 3.
and wherein the step of controlling the operating mode of the equalizer in response to the identification of the direct current (DC) offset component of said received signal comprises substeps of:	
determining whether or not said received signal is currently accompanied by said substantially constant direct current (DC) offset component;	Figs. 2, 11 and 12; detector 34 makes such determination; specification at page 38, line 10 to page 41, line 14.

calculating desired spectral response for said equalizer using at least a portion of said field synchronizing signal as a training signal, in response to it being determined that the direct current (DC) level said received signal is currently accompanied by said substantially constant direct current (DC) offset component; and	Specification at page 17, lines 6-9.
establishing desired spectral response for said equalizer other than from calculations using at least a portion of said field synchronizing signal as a training signal, in response to it being determined that said received signal is currently unaccompanied by said substantially constant direct current (DC) offset component.	Operation during QAM reception as disclosed at pages 17 and 18.
25. The method of claim 24 wherein said step of establishing desired spectral response for said equalizer other than from calculations using at least a portion of said field synchronizing signal as a training signal consists of establishing a flat amplitude-versus-frequency characteristic in response to it being determined that said received signal is currently unaccompanied by said substantially constant direct current (DC) offset component.	Operation as disclosed at pages 17 and 18.
28. A method of controlling the operating mode of an equalizer comprising:	Figs. 1, 2, 11 and 12; see equalizer 36 in Fig. 2 and specification at page 14, lines 10-23.
determining the variation, during an interval of time, of the direct current (DC) level of a received signal; and	Fig. 1, pilot detector 34; see Figs. 11 and 12 for details, and page 16, lines 4-19; the interval of time can start at the time a TV receiver is turned on, at the time of channel switching, or based on the time of kernel width of the digital lowpass filter in the VSB pilot presence detector 34.
controlling the operating mode of the equalizer in response to the determined variation,	Fig. 2 shows a DC level from detector 34 controlling the operating mode of equalizer 36; see page 6, lines 19-28, page 17, lines 6-9 and sentence bridging pages 17 and 18.

wherein the received signal comprises multi-level symbols representing data and a field synchronizing signal, said symbols being characterized by a DC offset and wherein the determining step further comprises	The VSB television signal for HDTV inherently contains multi-level symbols and field sync signals, the symbols being accompanied by a DC offset; page 13, lines 13-25; page 17, line 12-page 18, line 3.
processing the field synchronizing signal to determine the variation of the DC offset in the received signal,	Figs. 2, 11 and 12; the VSB pilot presence detector 34 processes all portions of a signal, including data and field sync signal.
wherein the field synchronizing signal comprises a pseudo random number symbol sequence and wherein the processing comprises sampling a part of the pseudo random number symbol sequence.	Figs. 2, 11 and 12; the VSB pilot presence detector 34 processes all portions of a signal, including the PN symbol sequence in the field sync signal.
29. The method of claim 28 wherein the sampled symbol sequence is surrounded by a plurality of non-variant symbols.	This is inherent in the VSB HDTV signal.
31. A digital television receiver comprising:	Figs. 1, 2, 11 and 12; see equalizer 36 in Fig. 2 and specification at page 14, lines 10-23.
a detector for determining the direct current (DC) level of a received digital television signal; and	Detector 34 in Fig. 1.
an adaptive equalizer having different operating modes for responding to said received digital television signal, the operating mode of said adaptive equalizer being selected responsive to the direct current (DC) level of said received digital television signal;	Equalizer 36 in Fig. 2.
the receiver further characterized by being of a type in which, responsive to the amplitude of a direct component of said received signal being more than a prescribed threshold value, said adaptive equalizer is conditioned to have its amplitude-versus-frequency characteristic determined responsive to calculations using at least a portion of said field synchronizing signal as a training signal.	Equalizer 36 in Fig. 2; specification at page 16, line 4- page 18, line 1.
32. The receiver of claim 31 further characterized by being of a type in which, responsive to the amplitude of said direct component of said received signal being less than a prescribed threshold level, desired spectral response for said adaptive equalizer is established other than from calculations using	Equalizer 36 in Fig. 2; specification at page 16, line 4- page 18, line 1.

a training signal.	
33. The receiver of claim 31 further characterized by being of a type in which, responsive to the amplitude of said direct component of said received signal being less than a prescribed threshold level, said adaptive equalizer is conditioned to have a flat amplitude-versus-frequency characteristic.	Equalizer 36 in Fig. 2; specification at page 6, line 4- page 18, line 1.
35. A receiver including an adaptive equalizer having different operating modes comprising:	Figs. 1, 2, 11 and 12; see equalizer 36 in Fig. 2 and specification at page 14, lines 10-23.
means for determining the variation of the direct current (DC) level of a received signal during an interval of time; and	Fig. 1, pilot detector 34; see Figs. 11 and 12 for details, and page 16, lines 4-19; the interval of time can start at the time a TV receiver is turned on, at the time of channel switching, or based on the time of kernel width of the digital lowpass filter in the VSB pilot presence detector 34.
means for controlling the operating mode of said adaptive equalizer as a function of the determined DC variation,	Fig. 2 shows a DC level from detector 34 controlling the operating mode of equalizer 36; see page 6, lines 19-28, page 17, lines 6-9 and sentence bridging pages 17 and 18.
wherein said received signal includes a field sync signal and wherein said DC variation determining means operates on said field sync signal.	Specification at page 16, line 4- page 18, line 1.
36. The receiver of claim 35 wherein said field sync signal comprises a pseudo random number sequence of symbols, and further including:	Specification at page 16, line 4- page 18, line 1.
means for sampling a portion of said sequence of symbols for processing by said DC variation means.	Specification at page 16, line 4- page 18, line 1.
38. A receiver for signals that comprise multi-level symbols representing data and a field synchronizing signal, said symbols being characterized by being accompanied by a substantially constant DC component, and for signals that comprise multi-level symbols representing data and being characterized by not being accompanied by said substantially constant DC component, said receiver comprising:	Figs. 1, 2, 11 and 12; see equalizer 36 in Fig. 2 and specification at page 14, lines 10-23; VSB signal has a DC component while QAM signals do not have such component.
a detector for determining the DC	Fig. 1, pilot detector 34; see Figs. 11 and 12 for

component of a received signal;	details, and page 16, lines 4-19.
an adaptive equalizer having different operating modes for responding to said multi-level symbols, said adaptive equalizer arranged for having its current operating mode selected responsive to the level of the direct component of said received signal as detected by said detector;	Equalizer 36 in Fig. 2 and described in the specification at page 14, lines 10-23.
the receiver further characterized by being of a type in which, responsive to the direct component of said received signal being at least a prescribed threshold level, said adaptive equalizer is conditioned to have its amplitude-versus-frequency characteristic determined responsive to calculations using at least a portion of said field synchronizing signal as a training signal.	Equalizer 36 in Fig. 2; specification at page 16, line 4- page 18, line 1.
39. The receiver of claim 38 further characterized by being of a type in which, responsive to the direct component of said received signal being below a prescribed threshold level, desired spectral response for said adaptive equalizer is established other than from calculations using a training signal.	Equalizer 36 in Fig. 2; specification at page16, line 4- page 18, line 1.
40. The receiver of claim 38 further characterized by being of a type in which, responsive to the direct component of said received signal being below a prescribed threshold level, said adaptive equalizer is conditioned to have a flat amplitude-versus-frequency characteristic.	Equalizer 36 in Fig. 2; specification at page 16, line 4- page 18, line 1.
41. The receiver of claim 39, further characterized by being of a type in which, responsive to the direct component of said received signal being below a prescribed threshold level, said adaptive equalizer is conditioned to have a flat amplitude-versus-frequency characteristic.	Equalizer 36 in Fig. 2; specification at page 16, line 4- page 18, line 1.

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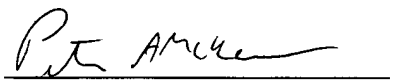
Respectfully submitted,



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